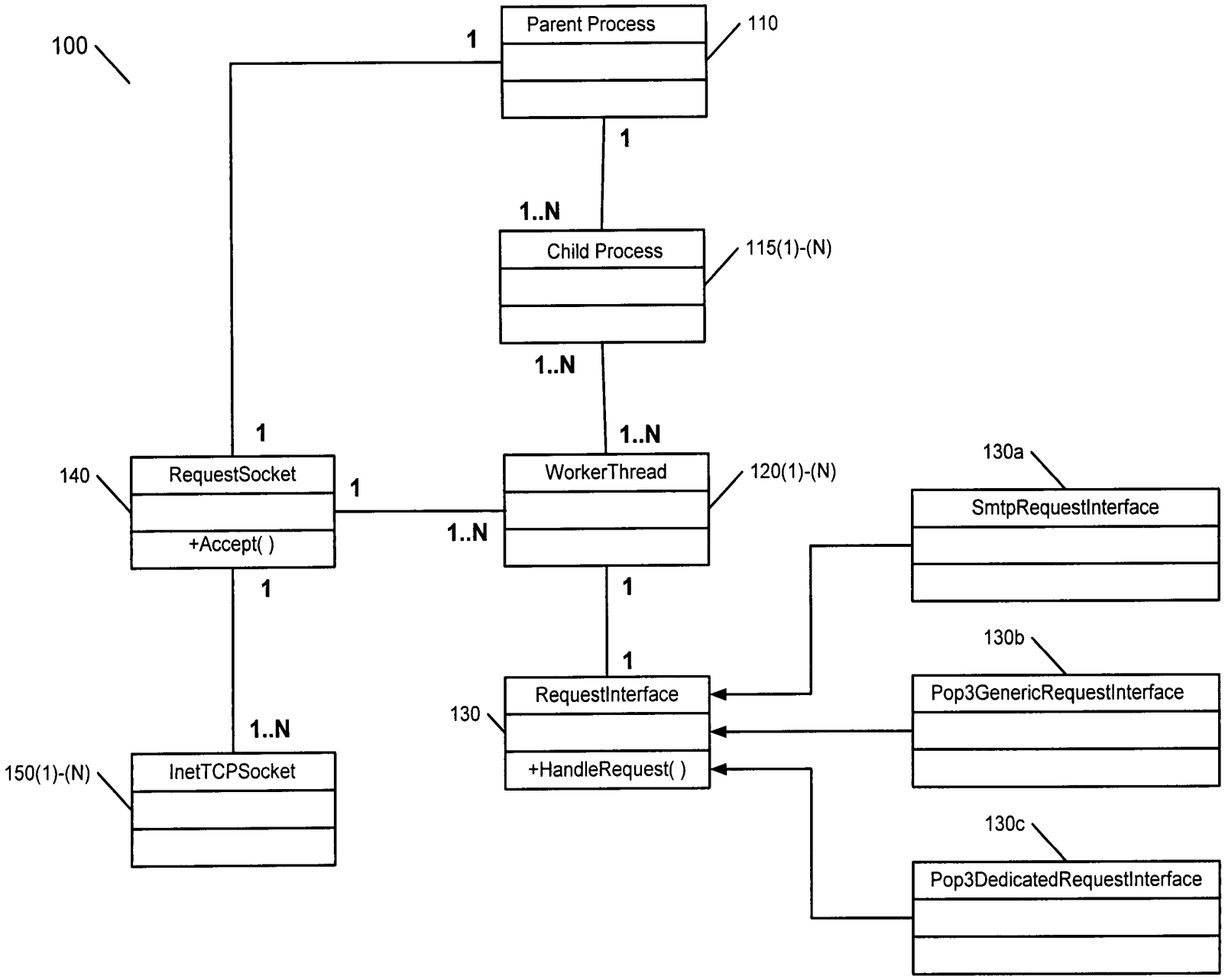
100
Parent Process
110
1
1
1..N
Child Process
115(1)-(N)
1..N
1
1..N
140
RequestSocket
+Accept( )
1
1..N
WorkerThread
120(1)-(N)
1
1
1..N
150(1)-(N)
InetTCPSocket
1
130
RequestInterface
+HandleRequest( )
130a
SmtpRequestInterface
130b
Pop3GenericRequestInterface
130c
Pop3DedicatedRequestInterface

FIGURE 1A

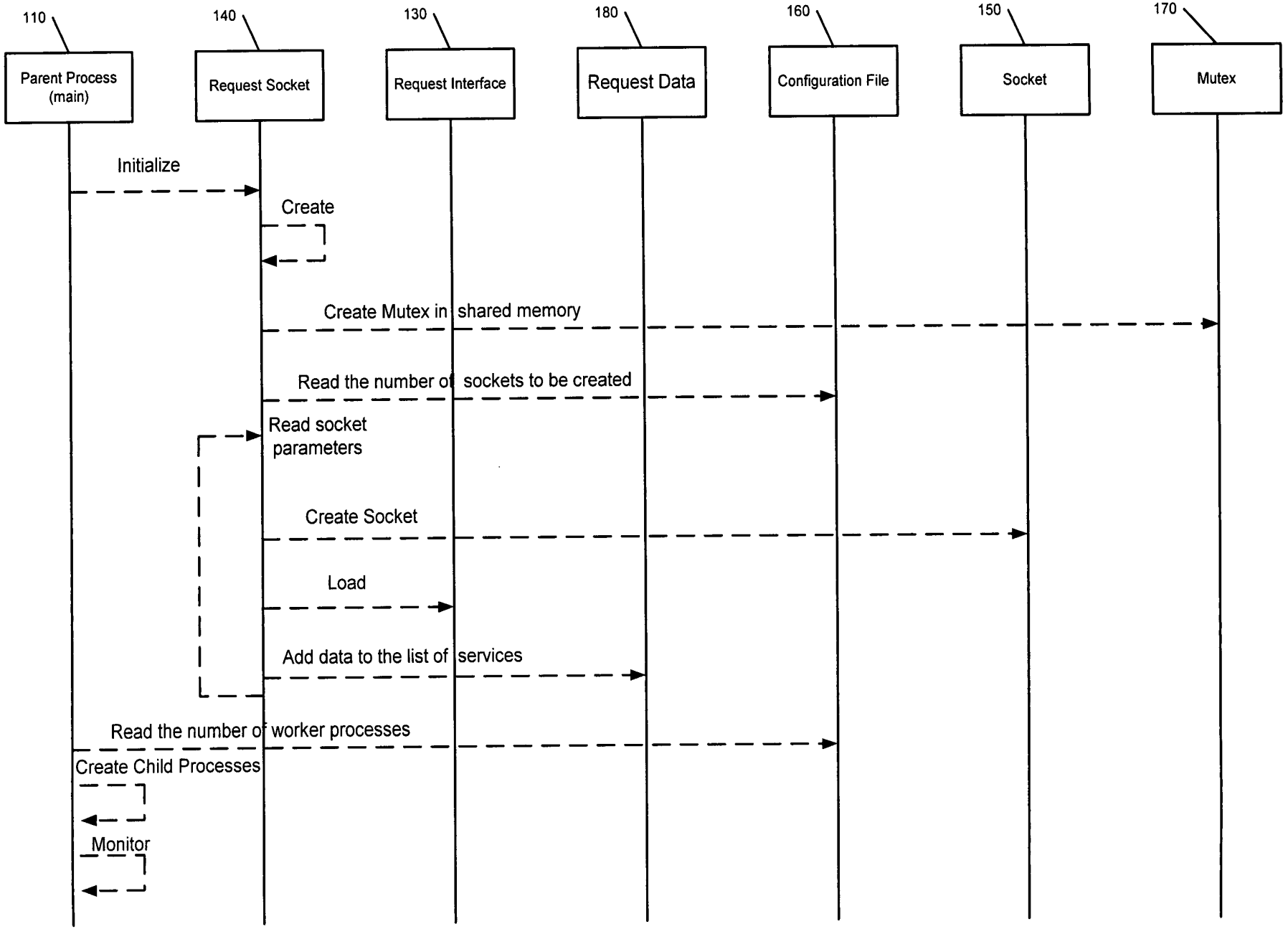
110
140
130
180
160
150
170
Parent Process (main)
Request Socket
Request Interface
Request Data
Configuration File
Socket
Mutex
Initialize
Create
Create Mutex in shared memory
Read the number of sockets to be created
Read socket parameters
Create Socket
Load
Add data to the list of services
Read the number of worker processes
Create Child Processes
Monitor

FIGURE 1B

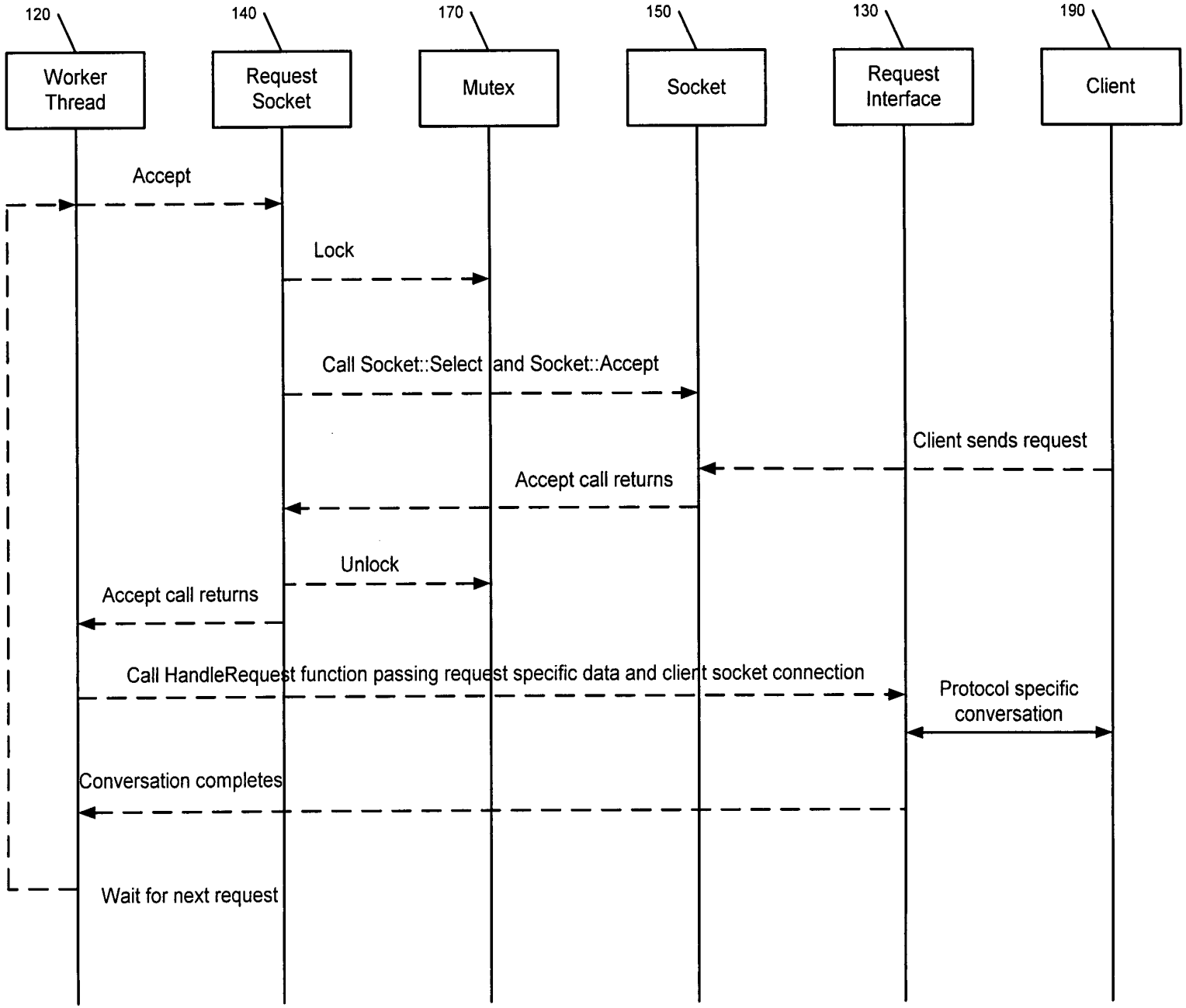
120
Worker Thread
140
Request Socket
170
Mutex
150
Socket
130
Request Interface
190
Client
Accept
Lock
Call Socket::Select and Socket::Accept
Client sends request
Accept call returns
Unlock
Accept call returns
Call HandleRequest function passing request specific data and client socket connection
Protocol specific conversation
Conversation completes
Wait for next request

FIGURE 1C

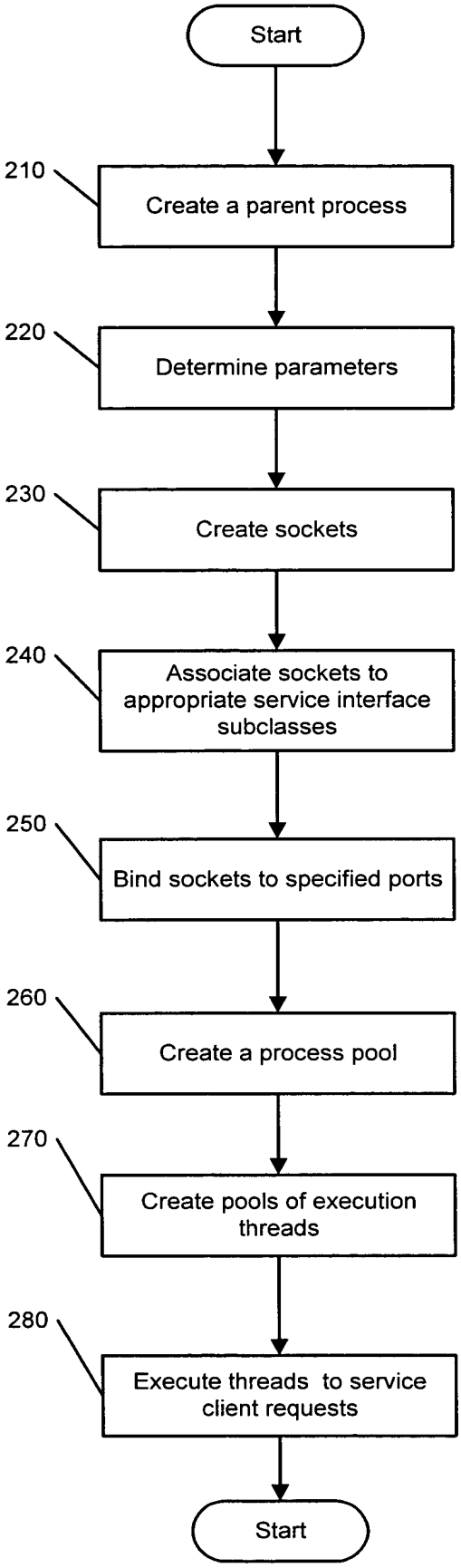
Start
210
Create a parent process
220
Determine parameters
230
Create sockets
240
Associate sockets to appropriate service interface subclasses
250
Bind sockets to specified ports
260
Create a process pool
270
Create pools of execution threads
280
Execute threads to service client requests
Start

FIGURE 2